

A New Genus and two New Species of Oecophoridae from Colombia (Lepidoptera)

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Abstract. The genus *Odonna* and the two species, *Odonna passiflorae* and *O. xenodora* are described as new and figured.

The first species, *Odonna passiflorae*, is described to provide a name for this moth which is a pest of *Passiflora mollissima* Bailey in Colombia. Because the second species, *O. xenodora*, collected over 20 years ago, was found to be congeneric with the first, it is included for completeness' sake.

The life history and descriptions of the early stages of *O. passiflorae* follow. Patricia Chacon de Ulloa and Marta Rojas Hernandez submitted the specimens of the adults to me for identification.

Odonna Clarke new genus.

Type Species: *Odonna passiflorae*, new species (by present designation).
The gender of the generic name is feminine.

Labial palpus slender, recurved; third segment shorter than second, acute. Tongue well developed; maxillary palpus minute, appressed to base of tongue. Head rough, side tufts spreading; ocellus absent. Antenna simple, shorter than forewing; scape with pecten. Thorax smooth. Forewing smooth, costa nearly straight, termen oblique, 12 veins; 1b furcate; 1c strongly preserved; 2, 3, and 4 equidistant; 5 nearer to 4 than to 6; 7 and 8 stalked, 7 to apex; 10 much nearer to 9 than to 11; 11 from one-third of cell; upper internal vein absent; hindwing with 8 veins; 2 remote from 3; 3 and 4 short-stalked, 5 about equidistant from 4 and 6; 6 to termen slightly below apex; 6 and 7 subparallel. Hind tibia roughened with long scales. Abdominal terga not setose.

Male genitalia. Uncus and socius present; gnathos absent.

Female genitalia. Signum absent.

I am unable to reconcile *Odonna* with any previously described genus. In my key to the Chilean genera (Clarke, 1971, p. 2) the present genus keys to *Talitha* Clarke, but in *Odonna* 3 and 4 of the hindwing are short-stalked; in *Talitha* 3 and 4 are widely separated. Furthermore, the female genitalia of the two genera are of quite different types. In *Talitha* the ductus bursae is long and coiled and the signum is present; in *Odonna* the ductus bursae is short, uncoiled and the signum is absent. In Meyrick's Key (1922, p. 3) this genus keys to the African *Ceranthes* Meyrick. In *Ceranthes* 3 and 4 of

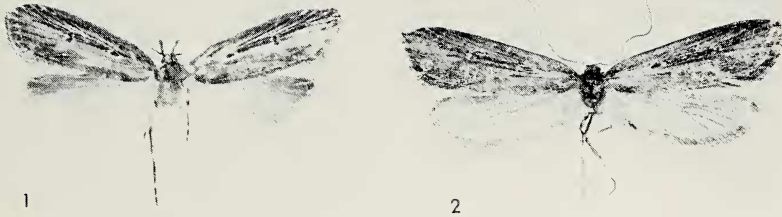


Fig. 1. *Odonna passiflorae*, n. sp. Holotype female.

Fig. 2. *Odonna xenodora*, n. sp. Holotype male.

forewing are approximate and 7 is to costa but in *Odonna* 3 and 4 are separate and 7 goes to apex. I have not seen the genitalia of *Ceranthes*.

***Odonna passiflorae* Clarke new species.**

Figures 1, 3, 5

Alar expanse 24-30 mm.

Labial palpus white profusely irrorate with fuscous. Antenna buff with grayish fuscous bars; scape fuscous. Head grayish fuscous. Thorax grayish fuscous, with some whitish scales posteriorly; tegula grayish fuscous, tipped with whitish scales. Forewing ground color buff but so heavily overlaid and streaked with fuscous that the ground is largely obscured; costa grayish fuscous mixed with white scales; veins streaked with fuscous; at basal fourth, in cell, a blackish-fuscous discal spot; at end of cell a similar spot preceded by whitish scales; cilia grayish fuscous and buff mixed. Hindwing buff basally shading to grayish fuscous distally; cilia buff with slight mixture of grayish fuscous. Foreleg buff heavily overlaid fuscous; midleg similar but with well-defined fuscous bar on outer side of tibia; hindleg buff strongly overlaid and suffused fuscous. Abdomen olive buff dorsoanteriorly, fuscous dorsoposteriorly; ventrally with buff scaling.

Male genitalia slides USNM 25128, 25129. Harpe costa terminating in a short, sharp point; sacculus produced as a dull-pointed process; cucullus long, slender, spatulate. Uncus bulbous basally; distally pointed. Vinculum U-shaped; saccus short, weak. Tegumen more than twice as long as broad. Anellus a small, oval plate with lateral sclerotized extensions. Aedeagus with slender, sclerotized rod dorsally.

Female genitalia slide USNM 25051. Ostium small, oval in a deep V-shaped cleft

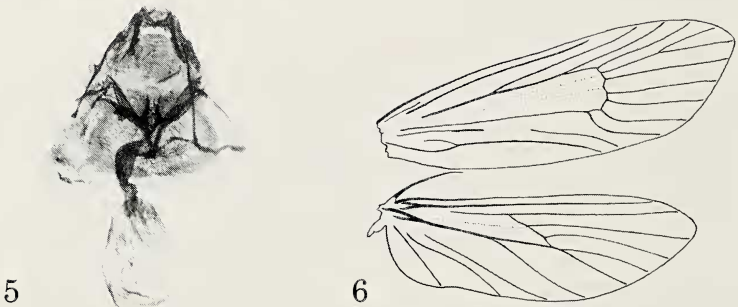
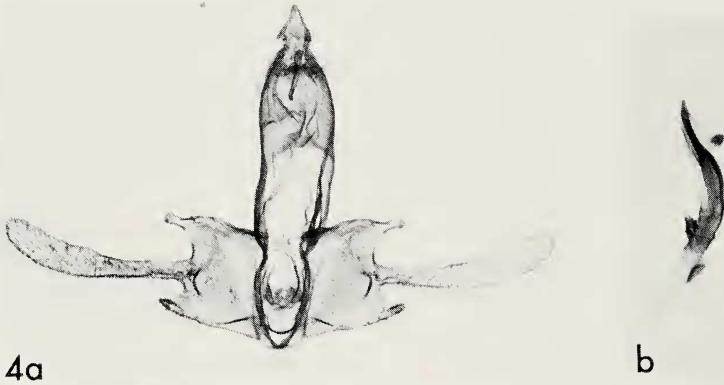
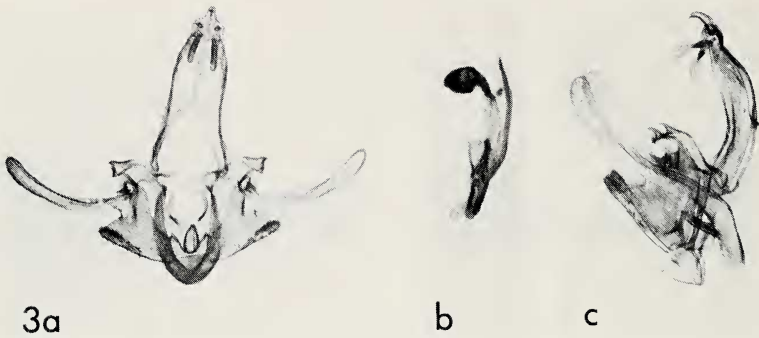


Fig. 3. *Odonna passiflorae*, n. sp. a, ventral view of male genitalia with aedeagus removed; b, aedeagus; c, lateral aspect of male genitalia with aedeagus *in situ*.

Fig. 4. *Odonna xenodora*, n. sp. a, ventral view of male genitalia with aedeagus removed; b, aedeagus.

Fig. 5. *Odonna passiflorae*, n. sp. a, ventral view of female genitalia (papillae anales missing).

Fig. 6. *Odonna xenodora*, n. sp. wing venation.

in 7th sternum; lamella postvaginalis granular. Inception of ductus seminalis slightly anterior to ostium. Ductus bursae membranous. Bursa copulatrix membranous.

Holotype. USNM 100175.

Type locality. Colombia, Valle, Tenerife.

Distribution. Colombia.

Foodplant. *Passiflora mollissima* Bailey.

Described from the ♀ holotype (May 1980) and 2 ♂♂ paratypes as follows: Colombia, Valle, Tenerife, June 1981; Colombia, Valle, July 1981. No collector is indicated on the labels, but the specimens were submitted to me by Patricia Chacon de Ulloa and Marta Rojas de Hernandez who may be the collectors.

Although generically distinct, *passiflorae* is similar in appearance to the North American *Apachea barberella* (Busck), but is lighter in color and lacks the brush of the second segment of the labial palpus.

Odonna xenodora Clarke new species.

Figures 2, 4, 6

Alar expanse 38 mm.

Labial palpus missing. Antenna pinkish buff with very faint darker annulations. Head pinkish buff with fuscous scales posteriorly. Thorax pinkish buff with sparse fuscous irroration. Forewing ground color buff with fuscous irroration; in cell a conspicuous longitudinal streak; at end of cell a white discal spot surrounded by fuscous scales; veins streaked with fuscous; around tornus and along termen fuscous streaks; cilia mixed buff and fuscous. Hindwing very pale gray (or sordid white) with veins indicated by pale grayish fuscous; cilia mixed grayish fuscous and buff. Foreleg and midleg buff overlaid fuscous; hindleg buff with sparse fuscous irroration. Abdomen first three segments golden dorsally, third segment irrorate with slender fuscous scales posteriorly; remainder sordid white dorsally slightly suffused and faintly irrorate grayish fuscous; ventrally sordid white irrorate with fuscous; abdominal terga not setose.

Male genitalia slide USNM 25135. Harpe costa short, terminating in a digitate process preceded by two small cones; sacculus with distal extension; cucullus long, straplike. Socius pendant; fingerlike. Uncus broad basally with a basal point on each side; apex pointed, hooked. Vinculum narrow; saccus slender. Tegumen two-and-a-half times as long as wide. Anellus with basal plate and lateral sclerotized extensions. Aedeagus pointed, with strongly sclerotized rod on one side.

Holotype. USNM 100176.

Type locality. Colombia, Cauca, Paramo de Purace, Lake San Rafael, 3570 m.

Distribution. Colombia.

Foodplant. Unknown.

Described from the unique ♂ holotype (29 Jan. 1959, J.F.G. Clarke).

Similar to *passiflorae*, new species, but larger and easily distinguished by genitalia.

This species exhibits the phenomenon of the increase in wing area, in proportion to body weight, induced by altitude, commonly found in Andean species.

Acknowledgments. The photographs were taken by Mr. Victor Krantz, Smithsonian Institution. The drawing of wing venation was done by Mrs. Elsie Froeschner.

Literature Cited

- CLARKE, J. F. GATES, 1978. Neotropical Microlepidoptera, XXI: New Genera and Species of Oecophoridae from Chile. Smithsonian Contributions to Zoology, No. 273: 1-80, figs. 1-54, pls. 1-6.
- MEYRICK, E., 1922. Lepidoptera - Heterocera: Family Oecophoridae. In Wytzman, Genera Insectorum 180: 1-224, 6 plates (color).
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Notes

A Recondite Breeding Site for the Monarch (*Danaus plexippus*, Danaidae) in the Montane Sierra Nevada

The Monarch butterfly (*Danaus plexippus* L.) traverses enormous distances in its annual migrations. These movements must carry it through or over extensive areas of habitat unfavorable for breeding, such as continuous forest and high-altitude montane regions, but data concerning its behavior in crossing such potential barriers are scanty. The Monarch as a breeder is characteristically associated with disturbed habitats in which species of milkweeds (Asclepiadaceae) behave as ruderals or range weeds, and little has been documented on its ability to find native milkweeds in their natural habitats, especially in mountainous regions. It seems certain that disturbance by man and overgrazing by his livestock have made host-finding easier for female Monarchs; in the pristine state stands of the hosts must have been much more scattered in the west, at least.

The Asclepiadaceae do not usually reach high elevations in California. *Asclepias speciosa* Torrey reaches 3030 m in the Convict Creek Basin on the east slope of the Sierra Nevada, but records above 2000 m are generally rare. The Monarch crosses the mountains in its seasonal migrations (it is observed as a migrant in Donner Pass in both spring and fall but does not have any host plants there, at 2100 m). Shapiro, Palm, and Wcislo (1981, J. Res. Lepid. 18(2): 92) found it breeding on *A. cordifolia* (Benth.) Jeps. above 2000 m on Packer's Peak; this is a very isolated stand of less than a dozen shoots, and required a traverse of at least 1.5 km of continuous forest from the nearest road. A much more isolated stand colonized by Monarchs was found on 18 July 1981 in the northern Sierra Nevada by Mr. William Overton and the author. This stand covers more than 1 ha on both sides of USFS road 19N14, about 1.5 km NNE of English Mountain Ranch, Sierra County, near Damfine Spring (ca. 1940 m). *Asclepias speciosa* is the most conspicuous plant, and on the date of our visit was in full bloom. About 30 adult and 50 larval Monarchs were observed. The site is located in R13E, T18N, mapped on the USFS "Foresthill and Big Bend Districts, Tahoe National Forest" sheet (1966) and in the NE corner of the USGS Emigrant Gap topographic 15' quadrangle. It is accessible from the south by USFS road 18N18 from Highway 20 and from the north (Henness Pass) by road 19N03.

This breeding site is surrounded by dense, continuous coniferous forest, completely free of Asclepiadaceae, for at least 9 km in all directions, except for a